

SolidWorks Workshop

Institute of Field roBOTics

Assembly

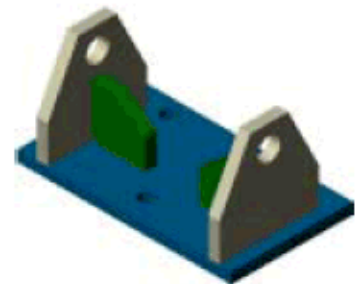
Exercise 1: Basic Mates

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Create this assembly by adding components to a new assembly and using **Insert Mate**.

This lab uses the following skills:

- Bottom-Up assembly creation.
- Adding components to an assembly.
- Creating mates between components using Insert Mate.

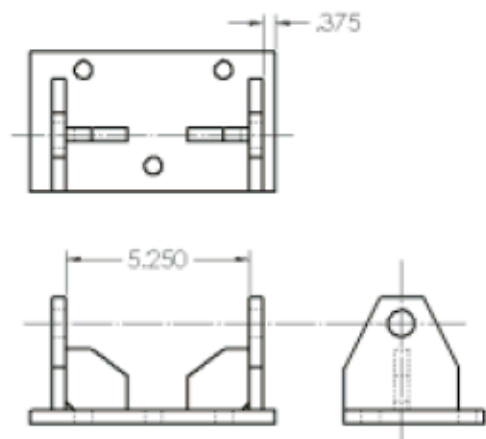


Units: **inches**

Design Intent

The design intent for this part is as follows:

1. Component parts are mated as shown in the details.
2. Two instances of the Brace and EndConnect are required.
3. Each Brace component is centered on the hole in the EndConnect component.

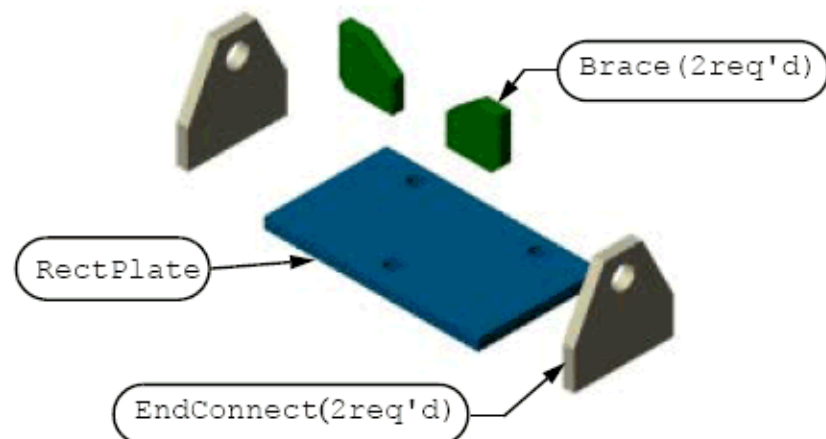


Tip

Mates between planes can be used to center components.

Part Design

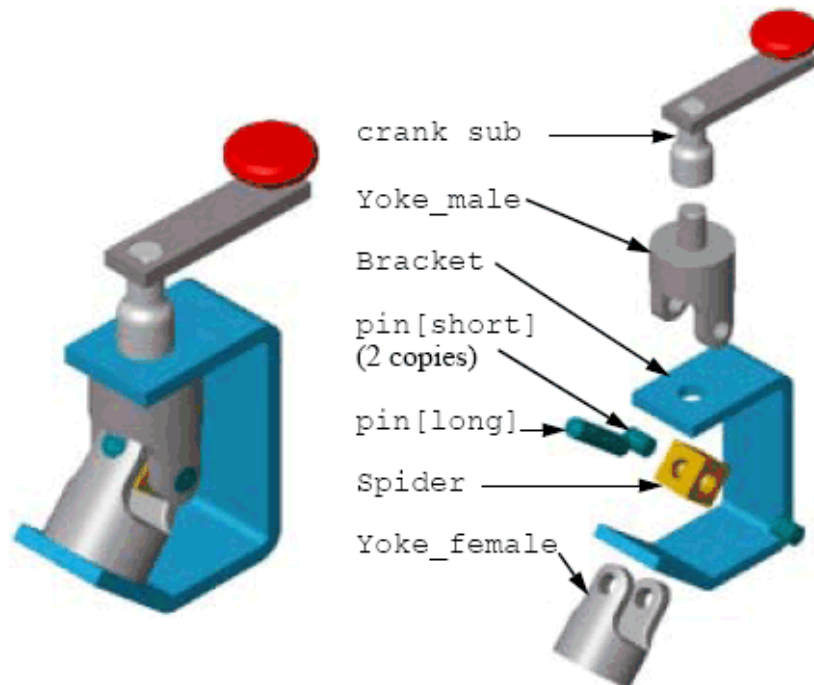
Use the following graphics along with the design intent to determine the shape and relationships within the assembly.



Exercise 2: Universal Joint

The Assembly

In this lesson we will make an assembly using existing components. The assembly is a universal joint, and is made up of a number of individual parts and one sub-assembly as shown below:



1 Open an existing part.

Open the part `bracket`. A new assembly will be created using this part.

The first component added to an assembly should be a part that will not move. By fixing the first component, others can be mated to it without any danger of it moving.

